July 15, 2005

Mr. John Barlow
Marina Yacht Club, LLC
P.O. Box 6200
Coeur d'Alene, ID 83816

RE: Preliminary Draft Certification for Army Corps of Engineers NWW No. 051200031 to Dredge and Place Fill in Coeur d'Alene Lake Associated with the Reconstruction of a Marina on Blackwell Island.

Dear Mr. Barlow,

We have reviewed your permit application and supplemental documents dated March 2005, June 9, 2005 and June 29, 2005 to discharge 5,100 cubic yards of gravel and rock riprap for shoreline stabilization, 3,100 cubic yards of dredged alluvium to fill an existing man-made boat basin and dredge 127,500 cubic yards of silts, sands and gravels from below the ordinary high water mark of Coeur d'Alene Lake to widen and deepen an existing man-made canal. The applicant has estimated that approximately one half of the dredged material is comprised of metals contaminated silts. Temporary work pads are also proposed so the dragline dredge can reach across the canal. Additionally, the applicant proposes to construct a seawall along 343 feet of shoreline and a boat launch ramp. Construction of this project (Project) would be phased over three years.

Recently, DEQ received three requests from the public to provide a preliminary draft certification. This preliminary draft certification process allows the public to examine this draft document and provide written comments to DEQ for a 30 day period of time. At the end of this comment period, DEQ considers the comments and provides our final certification decision. DEQ requested a time extension from the Army Corps of Engineers in order to accommodate this process. The Corps granted DEQ an extension to provide final certification no later than August 15, 2005.

To facilitate understanding of this draft certification, DEQ has prepared a series of seven tables. Tables 1-4 focus on surface water quality standards and monitoring of surface water. Table 5 provides data from the applicant and relates it to surface water quality standards and Tables 6 and 7 relate to ground water standards and monitoring.

Specifically, Table 1 describes the mandatory surface water quality monitoring schedule. Footnotes on Table 1 further describe details associated with monitoring. Table 2 lists the regulatory limits for six pollutants as you would see them listed in the Water Quality

Standards and Wastewater Treatment Requirements (Standards) (IDAPA 58.01.02.210.). The values presented in the Standards utilize a hardness of 100 mg/L for comparative purposes, however, when applying these standards to a specific project, calculations must be made using the correct hardness of the subject water body. Table 3 provides the hardness corrected values to be used for this project. Footnotes in Tables 2 and 3 provide additional information about how to interpret the water quality standards. Table 4 provides the turbidity standards for this project and where in the project they would be applied.

Table 5 compiles some of the data provided by the applicant regarding analysis of water found in the interstitial spaces of bottom sediments, termed "pore water". This data is compared to surface water quality standards in the table. This data and others, provided the basis for many of the conditions of the certification relating to protection of surface water and recommendations regarding ground water.

Table 6 provides an outline of DEQ's recommendations for ground water monitoring and Table 7 compares water quality standards found in the state's Ground Water Quality Rule with those found in the Idaho Rules for Public Drinking Water Systems. The purpose of Table 7 is to alleviate confusion between the two rules as they relate to this project.

Under Section 401 of the Federal Clean Water Act (CWA), federal agencies issuing discharge permits must be provided a notice of certification from the State of Idaho that the project will meet state water quality standards. By copy of this letter, the Army Corps of Engineers is being notified of our preliminary draft certification decisions and conditions.

The DEQ has made the following preliminary draft certification decisions:

General Conditions

1. The Project shall not violate state water quality standards as defined in Water Quality Standards and Wastewater Treatment Requirements (IDAPA 58.01.02).

2. The applicant shall provide DEQ with all monitoring results within 7 days after completion of each Phase of the dredging project. All monitoring data shall be available to DEQ upon request.

3. An emergency spill kit shall be located on the marine services dock. Personnel shall be trained at the beginning of each season in the effective use of this kit.

4. Liquid soap shall not be used to disperse minor fuel spills.

5. The Idaho Communication Center emergency response phone number (800-632-8000) shall be permanently displayed in the marine service area. A call to this number will mobilize emergency responders in the event of a gasoline or other hazardous materials spill. This number shall also be provided to each contractor on the project site during construction, in the event of a spill.

6. Each contractor working on this Project shall be informed that disposal of construction debris into the lake is not allowed and that such an activity will be a violation of this certification.

7. Metals contaminated sediments shall not be used to construct the temporary work pads or be used as fill for the man-made basin.

8. Compliance with the U.S. Environmental Protection Agency's (EPA) National Pollutant Discharge Elimination System storm water general permit is a condition of this certification.

9. Depending on the type of water treatment system utilized, an NPDES discharge permit may be required for discharges to surface water.

Dredging Related Conditions: Phase I and II

1. The proposed clamshell method of dredging utilizing a water filled cofferdam (such as the AquaDam™) is approved for use for construction of Phase I and II of this project. The cofferdam shall be used in accordance with manufacturer's specifications. Idaho Water Quality Standards and Wastewater Treatment Requirements (Standards) must be met immediately outside of the cofferdam. To determine compliance with the Standards the applicant shall perform monitoring as described in Table 1.

2. If monitoring shows that Standards have been exceeded during Phase I and II, **dredging shall immediately cease** until actions to avoid future noncompliance with Standards are implemented and monitoring demonstrates compliance with the Standards. The applicant shall notify DEQ at (208) 769-1422 if any standard is exceeded, within 2 hours of discovery. The notification shall be directed to June Bergquist and can be left on her voice mail.

Dredging Related Conditions: Phase III

1. Due to the water depth of Phase III, the applicant proposes an in-water method of dredging contained by commercially manufactured, performance tested (under similar conditions as found at the project site), non-permeable silt curtain (curtain). To insure that water quality is protected during dredging the curtain shall be installed according to manufacturer's specifications. No variation from manufacturer's specifications, range of tested performance, deployment configuration, anchoring system or curtain design limits shall be allowed on this project. Particular attention shall be placed on potential current velocities and proven performance of the curtain under such conditions. The applicant proposes the curtains to be configured with an inner primary curtain and an outer curtain. These parallel curtains shall be no greater than 10 feet apart. Two sets of curtains, one on the lake side and the other on the canal side, shall isolate the Phase III dredge area.

2. The area within the curtains shall be minimized to include only the actively dredged area. The curtains shall be moved every time the dragline is repositioned.

3. Due to the critical nature of the silt curtain system, the applicant shall have a maintenance boat and crew available during work hours capable of effecting repairs to the curtain, if needed. If boat traffic is adversely affecting curtain function the applicant shall insure that this problem is alleviated and that the performance of this best management practice is maximized.

4. To determine compliance with the Standards the applicant shall perform monitoring as described in Table 1 modified as follows: Both the canal side curtain and the lake side curtain shall be monitored. The lake side curtain shall be monitored for compliance with the Special Resource Water standards. For information regarding Special Resource Water standards refer to Table 3 footnote 2.

5. If monitoring shows that Standards have been exceeded during Phase III, **dredging shall immediately cease** and the applicant shall notify DEQ at (208) 769-1422 within 2 hours of discovery. The notification shall be directed to June Bergquist and can be left on her voice mail. The applicant's proposed Contingency Plan (see paragraph 6) shall be implemented and operational prior to resuming dredging. This plan shall be known as the Phase III Surface Water Contingency Plan.

6. The Phase III Surface Water Contingency Plan shall be to pump water out of the dredge site, creating a negative pressure gradient to contain dissolved metals and turbidity within the work area. The pumped water will be discharged into an upland infiltration basin. No pumped water shall be returned directly to surface waters. See **Ground Water** section paragraph 5 for compliance with the Ground Water Quality Rule.

If construction is completed in accordance with the described work plan, supplemental information and above conditions, DEQ certifies under Section 401 that this construction will comply with applicable requirements of Sections 301, 302, 303, 306, and 307 of the Clean Water Act, as amended, and will not violate Idaho Water Quality Standards and Wastewater Treatment Requirements.

Any modification or amendment to the project, which DEQ expects will result in additional impacts to water quality, shall require a new 401 water quality certification from DEQ before any construction activities affected by the modification or amendment may proceed.

All construction activities authorized under the referenced permit shall cease for failure of the applicant to comply with the conditions of this certification and shall not resume until the applicant demonstrates to the satisfaction of DEQ compliance with all the conditions of this certification.

This §401 Water Quality Certification may be appealed pursuant to the Environmental Protection and Health Act, Idaho Code 39-107(5), the Idaho Administrative Procedure Act and the rules of Administrative Procedure before the Board of Environmental Quality, IDAPA 58.01.23. Such an appeal is a prerequisite to any district court action and must be initiated by filing a petition for a contested case in accordance with the Rules of Administrative Procedure before the Board of Environmental Quality (IDAPA 58.01.23) within thirty-five days of the date of this 401 certification.

This certification does not imply approval of the activity by other agencies of the State of Idaho.

As part of DEQ's review of this project we also examined the potential for contamination of ground water under both the Ground Water Quality Rule (IDAPA 58.01.11) and the Idaho Rules for Public Drinking Water Systems (IDAPA 58.01.08).

The proposed dredge and fill project is located over ground water that is classified as a General Resource aquifer (U.S. EPA Map Showing Detailed Boundary of Spokane Valley-Rathdrum Prairie Aquifer. February, 1978). This General Resource aquifer contributes water to the nearby Rathdrum Prairie Aquifer.

The Rathdrum Prairie Aquifer is designated as a Sensitive Resource aquifer, the highest level of protection available for ground water in Idaho. It appears that the most immediate down gradient wells drawing from the Rathdrum Prairie Aquifer are the City of Coeur d'Alene's Locust and Linden wells. Our review of this project resulted in some recommendations to detect potential degradation of ground water from the project construction site.

Ground Water Monitoring Recommendations

The Ground Water Quality Rule IDAPA 58.01.11 provides that activities with the potential to degrade general resource aquifers must be managed in a manner which maintains or improves existing ground water quality through the use of best management practices and best practical methods to the maximum extent practical. The Rule also provides that sensitive aquifers shall not be degraded as a result of point or nonpoint source activities. Releases to ground water that exceed a ground water quality standard or injure a beneficial use of ground water are prohibited.

DEQ is concerned about possible changes in geochemical conditions from sediment burial and the potential for metals remobilization and travel to ground water. We are also concerned about potential metals contamination of ground water from the infiltration basin in the proposed Phase III Contingency Plan. In order to ensure compliance with the Ground Water Quality Rule DEQ recommends the following:

1. To detect changes in ground water quality, DEQ recommends monitoring as suggested in the attached Ground Water Monitoring Plan Outline (Table 6).

2. DEQ will consider the General Resource aquifer to be degraded and act to prevent further degradation and restore quality if monitoring indicates that ground water quality of the General Resource aquifer has declined to levels exceeding the numeric standards of the Ground Water Quality Rule or turbidity exceeds 5.0 NTUs over background as measured prior to start of the Project (Table 7).

3. DEQ will consider the Sensitive Resource aquifer to be degraded and act to prevent further degradation and restore quality if the project activities do not maintain or improve existing water quality within the Sensitive Resource aquifer.

After receiving public comment regarding this preliminary draft certification, DEQ will provide notice of our final certification decision. This decision will also be posted on our website: www.deq.state.id.us.

Sincerely,

Gwen P. Fransen, Regional Administrator
Coeur d'Alene Regional Office

cc:

Gregg Rayner, Army Corps of Engineers
Carl Washburn, Idaho Department of Lands
Mary Terra-Berns, Idaho Fish and Game
John Olson, U.S. Environmental Protection Agency

Table 1.

Surface Water Monitoring Schedule

Phase I, II and III	Metals[1]	Turbidity[2]	Sampling Frequency	Location[3]
Background Prior to Start of Dredging	X	X	Once per Phase	Within Phase area
First 7 days of Active Dredging	X	X	Twice per day when dredge is operating	Immediately outside of barrier(s). Turbidity requires matching sample of background condition in the water body being sampled.[4]
During Active Dredging		X	Daily; If visibly turbid, sample hourly until condition is remedied	Immediately outside of barrier(s). Spokane River down gradient of dredging.
Mid-point of Dredging Project	X		Once per Phase	Immediately outside of barrier during active dredging.

[1] Metals laboratory results shall be completed within 24 hours of sampling and examined by the project manager for compliance with Idaho Water Quality Standards (Standards). Samples shall quantify dissolved metals in µg/L (Cadmium, Copper, Lead, Zinc). Results exceeding Standards shall be reported to DEQ within 2 hours of discovery.

[2]Turbidity shall be analyzed on-site using a portable turbidimeter (measuring NTUs in whole numbers) and the results immediately examined by the project manager to determine compliance with water quality standards. Results exceeding Standards shall be reported to DEQ within 2 hours of discovery.

[3]Samples shall be taken at a level one half the depth of the water level at the center point of the barrier (cofferdam or curtain). If water depth is greater than 8 feet, the applicant shall collect two discrete samples at the center point of the barrier; one 2 feet up from the lakebed and the second sample 2 feet below the surface. These samples shall not be composites.

[4]Sample location for turbidity background shall be in a location that is not influenced by the Project or any other human-caused disturbance that creates turbidity, e.g. outfall pipes, motorboats, etc.

All monitoring data shall be available to DEQ upon request.

Table 2.

Aquatic Life Numeric Criteria for Toxic Substances (µg/L) in IDAPA 58.01.02.210.[1]

Metal	**CMC[2]**	**CCC[3]**
Arsenic	340	150
Cadmium[4]	2	1.0
Copper	17	11
Lead	65	2.5
Mercury	No standard	No standard
Zinc	120	120

[1]Table values assume hardness of 100 mg/L as calcium carbonate. Values are shown as dissolved metal and a water effect ratio of 1.0.

[2]CMC = Criterion Maximum Concentration is the 1 hour average concentration of a toxic substance that is protective of sensitive species of aquatic organisms.

[3]CCC = Criterion Chronic Concentration is the 4 day average concentration of a toxic substance that is protective of sensitive species of aquatic organisms.

[4]Currently, a proposed rulemaking changes the standards for cadmium to 1.34 (CMC) and 0.58 (CCC). Any changes in the toxics criteria shall apply to this project once the rule becomes final and is codified in the Idaho Administrative Code.

Table 3.

Aquatic Life Numeric Criteria for Toxic Substances (µg/L)
Adjusted for Hardness of Coeur d'Alene Lake[1,2]

Metal	**CMC[3]**	**CCC[4]**
Arsenic	340	150
Cadmium	0.58	0.40
Copper	5.1	3.8
Lead	16	0.61
Mercury	No standard	No standard
Zinc	40	40

[1]Table values assume hardness of 28 mg/L as calcium carbonate. Values are shown as dissolved metal and a water effects ratio of 1.0.

[2]Coeur d'Alene Lake is designated as Special Resource Water. This designation restricts point source discharges if they result in a reduction of ambient water quality below the applicable mixing zone (IDAPA 58.01.02.400.b.). Certifications made under the authority of 401 of the Clean Water Act address point source discharges. No mixing zone is allowed for this project and therefore, the construction activities must not exceed background concentrations of metals in the lake at the lake-ward mouth of the canal. Discharges to the Spokane River (canal and downstream) can exceed background metals concentrations but cannot exceed the above toxics criteria.

[3]CMC = Criterion Maximum Concentration is the 1 hour average concentration of a toxic substance that is protective of sensitive species of aquatic organisms.

[4]CCC = Criterion Chronic Concentration is the 4 day average concentration of a toxic substance that is protective of sensitive species of aquatic organisms.

Table 4.

Cold Water Aquatic Life Standard for Turbidity

Coeur d'Alene Lake (lake-ward mouth of canal)	Turbidity cannot exceed background turbidity of the lake. (IDAPA 58.01.02.400.01.b.)
Spokane River (includes Blackwell Island canal)	Turbidity shall not exceed background turbidity by more than 50 NTU instantaneously or more than 25 NTU for more than 10 consecutive days. (IDAPA 58.01.02.250.02.e.)

Table 5.

Pore Water Laboratory Analyses Results[1] Compared with Idaho Water Quality Standards and Background Metal Values for Coeur d'Alene Lake.[2] (µg/L)

Metal	Location 02	Location 13	Location 22/23	Location 22/23	Location 33/34	Location 33/34	Idaho Stnds[3]	Lakewater[4]	LakeWater[4]
Arsenic	19	7	8	3	15.7	5.5	150	0.5	<1
Cadmium	1.4	3	1	2	2.4	4.9	0.40	0.3	<0.2
Copper	22	12	13	4	17	15.3	3.8	3.0	3
Lead	35	13	57	11	95	82	0.61	<1	<1
Mercury	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	No stnd	<0.1	<0.1
Zinc	1,150	450	680	140	3,100	2,460	40	24	30

[1]Pore water was analyzed using the Synthetic Precipitation Leachate Procedure (SPLP method, EPA 1312). This test was used to examine the concentrations of dissolved metals present in the water found in the sediment layer of the proposed dredged site.

[2]Values are shown as dissolved metal.

[3]Idaho Water Quality Standards for criterion continuous concentrations (CCC) appropriate for use when examining potential project impacts. Table values assume hardness of 28 mg/L as calcium carbonate and a water effects ratio of 1.0.

[4]Method detection limits varied for arsenic, copper and zinc between these two data sets.

A "less than" sign followed by a number indicates that the metal was not present in concentrations higher than the limit of the test method.

Table 6. Ground Water Monitoring Plan Outline

Phase I, II, III	Metals[1]	Turbidity[2]	Total Dissolved Solids, Conductivity, pH, Iron	Sampling Frequency	Location
Background prior to start of dredging	X	X	X	At least one sample	Monitoring wells[3] on Blackwell Island located down gradient of activity being monitored.
During Active Dredging		X	X	Once every fifth day during active dredging	Monitoring wells[3] on Blackwell Island located down gradient of activity being monitored.
Start of the project plus one year.	X	X	X	Every six months from start of project	Monitoring wells[3] on Blackwell Island located down gradient of activity being monitored.
Rathdrum Prairie Aquifer	X	X	X	Background plus mid-point of each Phase and once following completion of each Phase.	Monitor well(s)[3] immediately down gradient of project site in the Rathdrum Prairie Aquifer

[1] Metals laboratory results should be completed within 24 hours of sampling and examined by the project manager for compliance with the Ground Water Quality Rule. Samples should quantify both dissolved and total metals in µg/L (Arsenic, Cadmium, Copper, Lead, Zinc). Any values exceeding standards shall be reported to DEQ immediately.

[2]The Ground Water Quality Rule (IDAPA 58.01.11) does not contain a numeric criteria for turbidity. However, narrative standards prohibit contaminant concentrations that are deleterious to ground water.

[3]Monitoring wells shall be of suitable construction to detect degradation from the dredging and filling activity and constructed in accordance with ASTM D4448-01, D6452-99 and D5092-02.

Table 7.

Ground Water Quality Rules (IDAPA 58.01.11) and
Idaho Rules for Public Drinking Water Systems (IDAPA 58.01.08)

Pollutant (Metals are total recoverable concentrations)	**Ground Water Quality Rule-General Resource aquifer** (mg/L unless otherwise specified)	**Public Drinking Water Systems Standards MCL**[1] (mg/L unless otherwise specified**)**	**Ground Water Quality Rule -Sensitive Resource aquifer**
Arsenic[2]	0.05	0.05	Shall Not Be Degraded
Cadmium	0.005	0.005	For All
Copper[3]	1.3	1.3 action level	Pollutants.
Lead[3]	0.015	0.015	
Mercury	0.002	0.002	
Zinc[4]	5	5	
Total Dissolved Solids[4]	500	500	
Turbidity	Narrative standard	No standard	
pH[4]	6.5 to 8.5 (no units apply)	6.5 to 8.5 (no units apply)	

[1]MCL = Maximum Contaminant Level

[2]The public drinking water standard for arsenic has been changed to 0.010 mg/L for new systems, compliance date for existing systems is January 1, 2006.

[3]Lead and copper are measured at the household tap for compliance with Public Drinking Water Systems standards.

[4]Ground water standards for zinc, total dissolved solids and pH are Secondary Constituent Standards and if exceeded in ground water may be indications of degradation or deleterious conditions. Zinc and total dissolved solids in the Public Drinking Water Systems rules are recommended levels.